AN 1995:532272 CAPLUS
DN 122:258639
TI Ketoglutaric acid for controlling microorganisms and seaweeds in the culture medium of laver
IN Okuzono, Kazuhiko
PA Daiichi Seimo Kk, Japan
SO Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM A01N037-42
ICS A01G033-02
CC 5-2 (Agrochemical Bioregulators)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07053310	A2	19950228	JP 1993-200843	19930812

AB Ketoglutaric acid at ≥ 0.1 % by wt./vol. is effective in controlling microorganisms harmful to laver, and controlling undesirable seaweeds interfering with the growth of laver. Ketoglutaric acid may be used in conjunction with nitrogen source like ammonium nitrate, and with acids like citric acid, and HCl.

ST laver culture microbicide carboxylic acid

IT Algicides
Bactericides, Disinfectants, and Antiseptics
Laver
(control of microorganisms and seaweeds in culture medium of laver with ketoglutaric acid and)

IT Seaweed
(control of microorganisms and seaweeds in culture medium of laver with ketoglutaric acid and acids)

IT 50-21-5, Lactic acid, biological studies 57-13-6, Urea, biological studies 64-18-6, Formic acid, biological studies 64-19-7, Acetic acid, biological studies 76-03-9, Trichloroacetic acid, biological studies 77-92-9, Citric acid, biological studies 79-11-8, Monochloroacetic acid, biological studies 79-43-6, Dichloroacetic acid, biological studies 87-69-4, Tartaric acid, biological studies 110-15-6, Succinic acid, biological studies 110-16-7, Maleic acid, biological studies 110-17-8, Fumaric acid, biological studies 526-95-4, Gluconic acid 6484-52-2, Ammonium nitrate, biological studies 6915-15-7, Malic acid 7558-80-7, Monosodium phosphate 7631-99-4, Sodium nitrate, biological studies 7647-01-0, Hydrochloric acid, biological studies 7664-38-2, Phosphoric acid, biological studies 7664-93-9, Sulfuric acid, biological studies 7697-37-2, Nitric acid, biological studies 7722-76-1, Mono-ammonium phosphate 7778-77-0, Monopotassium phosphate **12125-02-9**, Ammonium chloride, biological studies 15421-51-9, Inositol phosphate
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BIOL (Biological study); USES (Uses)
(control of microorganisms and seaweeds in culture medium of laver with ketoglutaric acid and)

IT **328-50-7**
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BIOL (Biological study); USES (Uses)
(for controlling microorganisms and seaweeds in culture medium of laver)

AN 83074524 MEDLINE
DN 83074524 PubMed ID: 6816216
TI Change in subunit composition of the iron protein of nitrogenase from Rhodospirillum rubrum during activation and inactivation of iron protein.
AU Preston G G; **Ludden P W**
SO BIOCHEMICAL JOURNAL, **(1982 Sep 1)** 205 (3) 489-94.
Journal code: 9YO; 2984726R. ISSN: 0264-6021.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198301
ED Entered STN: 19900317
Last Updated on STN: 19970203
Entered Medline: 19830119
AB The subunit composition of the Fe protein of nitrogenase from Rhodospirillum rubrum during activation and inactivation was investigated. It was found that the upper subunit (on gel electrophoresis) of the two-subunit Fe protein was converted into the lower subunit during activation in vitro. When the Fe protein was inactivated in vivo by the addition of NH4Cl and alpha-oxoglutarate to the cells, a phosphate-labelled upper band appeared. During activation in vitro by the activating enzyme, some of the phosphate of the upper band remained with the protein and appeared in the lower band. Activations in vitro were performed on inactive Fe protein obtained from cells grown with glutamate as the nitrogen source. Both native and oxygen-denatured Fe protein exhibited the loss of upper band during treatment with activating enzyme.
CT Check Tags: Support, Non-U.S. Gov't; Support, U.S. Gov't, Non-P.H.S.
Ammonium Chloride: PD, pharmacology
*Bacterial Proteins: ME, metabolism
Chromatography, Gel
Enzyme Activation: DE, drug effects
Ketoglutaric Acids: PD, pharmacology
*Metalloproteins: ME, metabolism
*Nitrogenase: ME, metabolism
Nonheme Iron Proteins
*Rhodospirillum rubrum: EN, enzymology
RN 12125-02-9 (Ammonium Chloride); 328-50-7 (alpha-ketoglutaric acid)
CN 0 (Bacterial Proteins); 0 (Ketoglutaric Acids); 0 (Metalloproteins); 0 (Nonheme Iron Proteins); EC 1.18.6.1 (Nitrogenase)

======= WPI =======

TI - Agent contg. keto-glutaric acid - used for controlling and eliminating algae and bacteria from cultured layer

AB - J07053310 Agent contains ketoglutaric acid.

- Also claimed is an agent contg. at least 1 of ammonium nitrate, ammonium chloride, monoammonium phosphate, urea, sodium nitrate and nitric acid as a nitrogen source, monopotassium phosphate, monosodium phosphate and inositol 6-phosphate (phytic acid) as a phosphorus source, in addn. to at least 0.1 wt./vol.% ketoglutaric acid.
- Also claimed is an agent contg. citric acid, malic acid, tartaric acid, succinic acid, gluconic acid, acetic acid, mono-, di- or tri-chloroacetic acid, lactic acid, maleic acid, fumaric acid, formic acid, hydrochloric acid, phosphoric acid, nitric acid and sulphuric acid, in addn. to at least 0.1 wt./vol.% ketoglutaric acid.
- USE/ADVANTAGE - The agent is useful for eliminating algae e.g. Enteromorpha adhered on a laver culturing net, and for eliminating bacteria belonging to genus Phythium or Olpidiopsis. The agent has strong bactericidal activity to bacteria belonging to genus Pythium or Olpidiopsis. The time required for eliminating the Enteromorpha is short.
- In an example, a 0.5 w/v% sea water soln. of ketoglutaric acid was prepd. and Enteromorpha was immersed in the soln. for 5 mins., then taken out from the soln., washed with sea water and static cultured was carried out after 2 days the Enteromorpha was discoloured or decoloured.(Dwg.0/0)

PN - JP7053310 A 19950228 DW199517 A01N37/42 004pp
PR - JP19930200843 19930812
PA - (DAII-N) DAIICHI SEIMO KK
MC - C05-A01A C05-A01B C05-B01P C05-B02A2 C05-B02A3 C05-C C10-A07 C10-A13C C10-C02 C14-A01 C14-A05 D05-H01 D09-A01C
DC - C03 D16 P13
IC - A01G33/02 ;A01N37/42
AN - 1995-128197 [17]

======= PAJ =======

TI - EXTERMINATING AGENT AGAINST MISCELLANEOUS ALGAE AND DISEASE INJURIES OF CULTURED LAVER

AB - PURPOSE:To provide a medicine capable of exterminating miscellaneous algae and a bacterium or a fungus of the genus Pythium, Olpidiopsis, etc., causing red rot or chytrid blight in an ultrashort time as compared with that of other organic acids.

- CONSTITUTION:This exterminating agent against miscellaneous algae and disease injuries of cultured laver contains >=0.1wt./vol.% ketoglutaric acid as the active ingredient. At least one selected from the group consisting of ammonium nitrate, ammonium chloride, monoammonium phosphate, urea, sodium nitrate and nitric acid as the nitrogen source and monopotassium phosphate, monosodium phosphate, phosphoric acid and inositol 6-phosphate as the phosphorus source can be contained in the exterminating agent. Furthermore, at least one selected from the group consisting of citric acid, malic acid, tartaric acid, succinic acid, gluconic acid, acetic acid, chloroacetic acid, lactic acid, maleic acid, fumaric acid, formic acid, hydrochloric acid, phosphoric acid, nitric acid and sulfuric acid can be used in combination so as to enhance exterminating effects. The fungus of the genus Pythium causing red rot can be exterminated in 1min. and green laver can be exterminated in 5min. by immersing the laver in a solution of seawater containing 0.5wt./vol.% ketoglutaric acid.

PN - JP7053310 A 19950228
PD - 1995-02-28
ABD - 19950630
ABV - 199505
AP - JP19930200843 19930812
PA - DAIICHI SEIMO KK
IN - OKUZONO KAZUHIKO
I - A01N37/42 ;A01G33/02